Air Quality: It's Up to You

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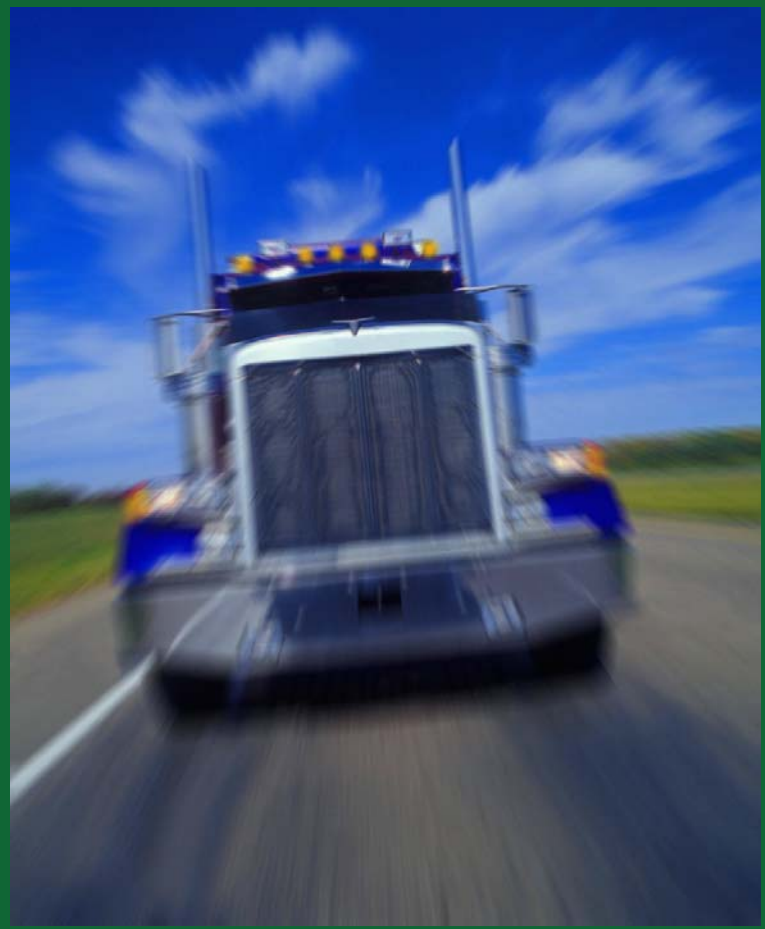
October 22, 2008

EPA's Criteria Pollutants

- Particulate Matter (PM)
- Carbon Monoxide (CO)
- Ozone (O_3)
- Oxides of Nitrogen (NO_x)
- Sulfur Dioxide (SO_2)
- Lead (Pb)

PM: Where does it come from?

- Diesel engines
- Power plants
- Factories/Industries
- Windblown dust
- Wood stoves
- Other sources



Ozone

- What is it?
  - Colorless gas made of 3 oxygen atoms
  - Component of smog
- How is it formed?
  - NO_x and VOCs react with sunlight
- When does it usually form?
  - Hot, dry days
  - Little or no wind

What produces NO_x and VOCs?

- Industrial emissions
- Motor vehicle exhaust
- Gasoline vapors
- Chemical solvents

Where is Ozone Found?

- Stratosphere
  - Protects us from UV rays
  - "Good" ozone
- Troposphere
  - Ground-level, contributes to smog
  - "Bad" ozone

Ozone is "good up high, bad nearby"

Oxides of Nitrogen (NO_x)

- Gases formed from nitrogen and oxygen
- Major component of acid rain
- Emission sources:
  - Fossil fuels: gasoline, coal
  - Vehicles
  - Power plants
  - Coal-burning stoves

Sulfur Dioxide (SO_2)

- Gas formed from sulfur and oxygen
- Major component of acid rain
- Smells bad
- Emission Sources:
  - Burning of coal and oil
  - Power Plants
  - Factories/Industries
  - Coal-burning stoves
  - Refineries

What Can You Do?

- Carpool, walk, bike
- Conserve electricity
- Keep cars well-maintained
- Try not to spill gas when refueling
- Refuel car, mow lawn after 6 p.m.

What Have We Done?

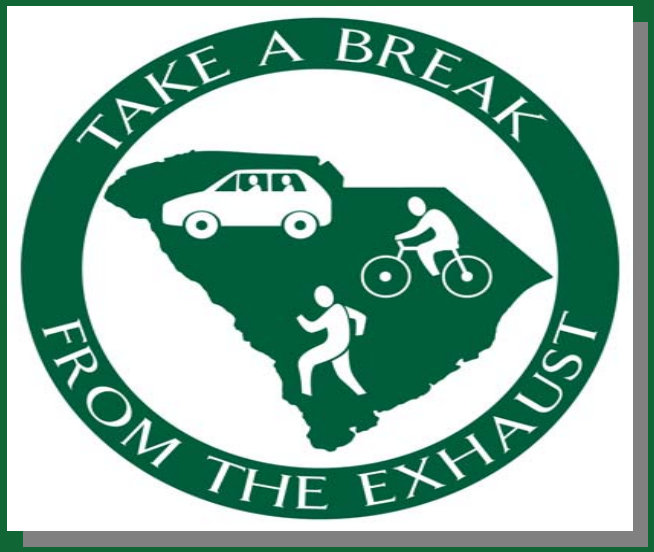
- The average new vehicle sold in the U.S. today gets twice as many miles per gallon as new cars did in 1973.
- Many consumers and businesses are starting to rely on vehicles that run efficiently on electricity, solar power or compressed natural gas.

What Have We Done?

- Many new homes and buildings use EPA's Energy Star features. They are up to 30% more energy efficient than standard designs. Even older homes can be upgraded to become 20% more energy efficient.
- Wind power provides enough electricity to power 4.5 million homes in the U.S.

Sources:
Energy Star (www.energystar.gov), American Wind Energy Association (www.awea.org)

Take A Break From The Exhaust



Program Goals:

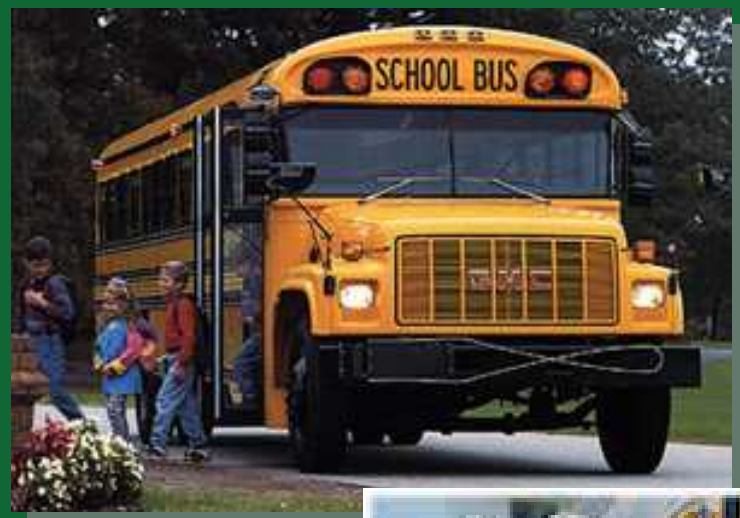
- **To reduce emissions from mobile sources**
- **To increase awareness of the impact of mobile sources on air quality**
- **To encourage employees to take voluntary actions to help improve air quality**

b²: Breathe Better

an anti-idling clean air campaign

b2

breathe better



Why b^2?

- Children most at risk from ozone, PM
  - Most school buses use diesel fuel
  - Cars idling in car lane contribute to ozone formation
  - Air intakes around school building take in pollution from idling, affect indoor air quality
- Children's lungs still developing, more susceptible than healthy adults to exposure
- Children breathe 50% more air per pound of body weight than adults

For more information

Criteria Pollutants:

http://www.epa.gov/air/urbanair/

Take a Break from the Exhaust

www.scdhec.gov/takeabreak

b^2 www.scdhec.gov/b2

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